

1. A method for improving the performance of a swim fin, comprising:
  - (a) providing a foot attachment member having a toe portion;
  - (b) providing a blade member connected to said foot attachment member and forming a forward extension of said foot attachment member, said blade member having opposing surfaces, outer side edges, a root portion adjacent said toe portion of said foot attachment member and a free end portion spaced from said root portion and said foot attachment member, said blade member having a predetermined length between said root portion and said free end portion, said blade member having a longitudinal midpoint between said root portion and said free end portion, said blade member having a first half portion between said root portion and said longitudinal midpoint and a second half portion between said longitudinal midpoint and said free end portion;
  - (c) providing said blade member with sufficient root portion flexibility adjacent said root portion to permit a root pivotal node to form during use within said blade member adjacent said root portion, said root portion flexibility being arranged to permit said first half of said blade member to experience a first half deflection of at least 10 degrees during a relatively light kicking stroke such as used to reach a relatively relaxed cruising speed,
  - (d) providing said blade member with sufficient midpoint flexibility adjacent to said longitudinal midpoint to permit a midpoint bending node to form during an inversion portion of said relatively light kicking stroke within said blade member adjacent said longitudinal midpoint, said midpoint bending node forming a second half deflection adjacent to said second half of said blade member during said inversion portion of said relatively light kicking stroke, said first half deflection and said second half deflection forming an S-shaped wave along said predetermined length of said swim fin during said inversion portion.
2. A method for providing a swim fin, comprising:
  - (a) providing a foot attachment member having a toe portion;

(b) providing a blade member connected to said foot attachment member and forming a forward extension of said foot attachment member, said blade member having a root portion adjacent said foot attachment member and a free end portion spaced from said root portion and said foot attachment member, said blade member having a longitudinal midpoint between said root portion and said free end portion, said blade member having a first half portion between said root portion and said longitudinal midpoint and a second half portion between said longitudinal midpoint and said free end portion, said blade member being pivotally connected to said foot attachment member adjacent said toe portion; and

(b) providing said blade member with at least one extensible load bearing member arranged to provide a major portion of structural support for said blade member, at least one load bearing member having sufficient extensibility to permit said blade member to flex around a transverse axis to a lengthwise reduced angle of attack that permits said blade member to experience a deflection of at least 10 degrees from a neutral position to a deflected position under relatively light load conditions such as created during a relatively light kicking stroke used to achieve a relatively slow swimming speed, a major portion of said deflection occurring along said first half portion of said blade member, said at least one load bearing member being able to experience a longitudinal extension of at least 3% during said deflection, said at least one load bearing member having a transverse dimension sufficient to substantially prevent said rib member from collapsing during said deflection, said tension surface portion being made with a resilient material capable of recovering from said extension over said elongation range and snapping said blade member back to said neutral position at the end of a stroke.